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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/536,534

06/27/2005

David M. Thomas

IRF-0041

7084

26259 7590 06/15/2007  
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EXAMINER

MILLER, DANIEL H

ART UNIT

PAPER NUMBER

1775

MAIL DATE

DELIVERY MODE

06/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/536,534	<b>Applicant(s)</b> THOMAS, DAVID M.	
	<b>Examiner</b> Daniel Miller	<b>Art Unit</b> 1775	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/3/2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's traverse of the restriction requirement has been carefully considered.

However, it is still believed that the claims do not share a special technical feature. First, the article claims require a "thin layer", wherein the method claims don't refer to formation of a layer at all nor do they require it to be thin. Second the article claims (claim 1) require depositing a layer, while the method claims (claim 4) provide for "metallizing exterior surfaces"; it is not clear that these are providing the same article via this method. Since the claims do not share a special technical feature as described above the restriction is maintained.

The restriction is made final.

Rejoinder of the method claims will be considered upon indication of allowance of the article claims if the method claims are commensurate in scope with the structures of the article.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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3. Regarding claim 1, what is a "thin layer"? The term thin is considered indefinite. Applicant has not set forth a clear indication for a range which would give guidance as to how the term should be interpreted. Clarification required.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Gamble (US 3,702,592).

3. Gamble teaches a material which can comprise (an organo-metallic complex) molybdenum hexacarbonyl (column 4 line 40-45), with a binder added comprising phenol-formaldehyde resin and a heat transfer material, (carbon material) graphite (column 4 line 45-55). The molybdenum hexacarbonyl is a preferred organo-metallic complex by applicant (bottom page six of instant specification), the binder is the same as recited by applicant (also page 6 instant specification), as well as containing graphite and substantially similar composition as applicant's exemplary embodiment. Given the substantially similar composition one would expect the disclosed composition of Gamble to inherently have similar properties (i.e. electrical conductivity). The composite of Gamble is covered by outer walls that are fabricated from cold-rolled steel and an inner

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housing is anodized aluminum 0.050 inches thick (column 4 line 1-10). This is considered a thin layer of metallic material, in so far as applicant has defined thin.

4. Claim 7 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gamble (US 3,702,592).

5. The composition of Gamble is capable of functioning as a fuel cell separator. In the alternative it would have been obvious to one of ordinary skill in the art to use the composition of Gamble in a fuel cell because it would exploit known characteristics of resistance to heat and electrical conductivity commonly associated with carbon composites (such as those containing phenol resin, graphite, and organo-metallic complex).

### ***Response to Arguments***

6. Applicant's arguments filed 4/3/2007 have been fully considered but they are not persuasive. The composite of Gamble is covered by outer walls that are fabricated from cold-rolled steel and an inner housing is anodized aluminum (column 4 line 1-10). This is considered a thin layer of metallic material, in so far as applicant has defined thin. Therefore, Gamble meets the newly amended (added) limitations of claim 1. Rejection maintained.

7. See above regarding the examiner's position on maintaining the restriction requirement.

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8. Applicant states that Gamble is in no way suggestive of a composition of Molybdenum hexacarbonyl, phenol-formaldehyde resin, and graphite exhibiting electrical conductivity. The claims are not commensurate with the arguments, as they do not require all of these components in combination.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Miller whose telephone number is (571) 272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Miller



JENNIFER C. MCNEIL  
SUPERVISORY PATENT EXAMINER

6/11/7